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10/532,525	10/21/2005	Nicholas P. De Luca	D-30335-01	6004

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Daniel B Ruble
Sealed Air Corporation
Law Department
Post Office Box 464
Duncan, SC 29334

EXAMINER

WU, VICKI H

ART UNIT	PAPER NUMBER
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1745

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,525	Applicant(s) DE LUCA, NICHOLAS P.	
	Examiner VICKI WU	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,23,24,26-28,31,34-39,48-51 and 53-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,23,24,26-28,31,34-39,48-51 and 53-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a final Office action in response to applicant's arguments and claim amendments filed on 01/18/2011.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 36 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 36 recites the limitation, "the platform comprises a second conveyor," however, the "second conveyor" is not described in the Specification. Examiner has examined Claim 36 as dictated by the current limitations.

Claim 36 also recites the limitation "to compress the stacked arrangement of discrete sheets between the platform and the conveyor" in the last paragraph (ii). There is insufficient antecedent basis for this limitation in the claim. Claim 36 teaches a first conveyor and a second conveyor and it is not clear which conveyor is being referenced.

Art Unit: 1745

Examiner has examined Claim 36 as dictated by the current limitations. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 36, 48-49 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,088,047 (Bynum).

Regarding claim 36, Bynum teaches a machine comprising:

a first conveyor adapted to movably support the sheet stock and sequential discrete sheets of desired shapes (86, Figure 3; col. 10 lines 59-66);

a platform (66, Figure 3; col. 11 lines 29-36) below the conveyor adapted to receive the discrete sheets from the conveyor, wherein:

the platform comprises a second conveyor (by definition, a mechanical apparatus that transports materials, packages, or items being assembled from one place to another) (63, Figure 2A; col. 8 lines 63-67); and

the platform and first conveyor are movable relative each other (col. 11 lines 29-36):

Art Unit: 1745

i) to place the discrete sheets in stacked arrangement on the platform when receiving the discrete sheets from the conveyor (60, Figure 3; col. 11 lines 29-36);

ii) to compress the stacked arrangement of discrete sheets between the platform and the conveyor (col. 11 lines 29-36).

Regarding claim 48, Bynum teaches a machine comprising:

a conveyor adapted to movably support sheet stock (86, Figure 3; col. 10 lines 59-66);

one or more cutting heads transversely and longitudinally relative to the conveyor (99, Figure 3; col. 11 lines 36-38)) to define a cutting area over (by definition, upon the surface of) the conveyor, and adapted to cut the sheet stock into the cutting area over the conveyor while the sheet stock is supported by the conveyor into sequential discrete sheets of desired shapes (60, Figure 3; col. 11 lines 36-38); and

a platform (66, Figure 3; col. 11 lines 29-36) adapted to receive the discrete sheets from the conveyor, wherein the platform and conveyor are movable relative each other (col. 11 lines 29-36):

i) to place the discrete sheets in stacked arrangement on the platform when receiving the discrete sheets from the conveyor (60, Figure 3; col. 11 lines 29-36); and

ii) to compress the stacked arrangement of discrete sheets between the platform and the conveyor (col. 11 lines 29-36).

Art Unit: 1745

Regarding claim 49, Bynum teaches the platform and conveyor are movable relative each other to compress the stacked arrangement of discrete sheets between the platform and the conveyor (col. 11 lines 29-36).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 21, 23, 35, 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,088,047 (Bynum) in view of US Patent 4,966,059 (Landeck).

Regarding claim 21, Bynum teaches a machine comprising:

Art Unit: 1745

a conveyor adapted to movably support the sheet stock and sequential discrete sheets of desired shapes (86, Figure 3; col. 10 lines 59-66);

one or more cutting heads (99, Figure 3; col. 11 lines 36-38) movably transversely and longitudinally relative to the conveyor and adapted to cut the sheet stock supported by the conveyor into the discrete sheets (60, Figure 3; col. 11 lines 36-38);

a platform (66, Figure 3; col. 11 lines 29-36) below the conveyor adapted to receive the discrete sheets from the conveyor, wherein the platform and conveyor are movable relative each other (col. 11 lines 29-36):

- i) to place the discrete sheets in stacked arrangement on the platform when receiving the discrete sheets from the conveyor (60, Figure 3; col. 11 lines 29-36);
- ii) to compress the stacked arrangement of discrete sheets between the platform and the conveyor (col. 11 lines 29-36).

Bynum does not expressly disclose that said cutting heads are specifically fluid jet cutting heads.

However, Landeck teaches waterjet cutting heads (106, Figure 1) for cutting a sheet (101, Figure 1), wherein said waterjet cutting heads can be oriented underneath a conveyor to point and cut upwards (see axis of rotation 105, Figure 1; col. 15 lines 48-50; col. 16 lines 33-41).

Art Unit: 1745

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to incorporate the waterjet cutting heads of Landeck in order to modify and / or replace the cutting heads of Bynum. The rationale to do so would have been the motivation provided by the teachings of the advantages to incorporating said waterjet cutting heads of Landeck; that said waterjet cutting heads are capable of continuous repetitive cutting, and advantageously provide high-speed cutting of the sheet, without suffering from splashback problems and generally raggedly cut edges, and wherein said cutting is unaffected by stresses imposed on the waterjet heads, (Landeck: col. 5 lines 37-48; col. 6 lines 23-28; col. 7 lines 17-20).

Regarding claim 23, Bynum teaches the machine further comprises a computerized controller for controlling the movements of the conveyor, the one or more cutting heads, and the platform (col. 3 lines 23-50).

Regarding claim 35, Bynum teaches the platform is movable upwardly toward the conveyor to compress the stacked arrangement of discrete sheets between the platform and the conveyor (col. 11 lines 29-36).

Regarding claim 37, Bynum teaches a sheet stock feeding system upstream of the conveyor (92, Figure 3; col. 11 lines 7-12).

Art Unit: 1745

Regarding claim 38, Bynum teaches the sheet stock feeding system is adapted to supply a continuous sheet of sheet stock of cushioning material to the conveyor (92, Figure 3; col. 11 lines 7-12).

Claims 24, 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,088,047 (Bynum) in view of US Patent 4,966,059 (Landeck).

Regarding claims 24, 26-27, the teachings of the limitations of Bynum in view of Landeck are detailed above in the rejection of claim 21 under 35 U.S.C. 103(a).

However, Bynum in view of Landeck does not expressly disclose that the conveyor comprises a vacuum conveyor. Bynum in view of Landeck further does not expressly disclose an adhesion station upstream from the platform that is adapted to apply an adhesive to discrete sheets, or a heating station upstream from the platform that is adapted to heat the discrete sheets.

An alternative embodiment of Bynum teaches a method and apparatus for processing discrete laminate sheets, said apparatus comprising a vacuum conveyor (10, Figure 4A; col. 12 lines 17-26) that applies vacuum to a platform (108, Figure 4A; col. 12 lines 16-26), and an adhesion station upstream from the platform that is adapted to apply an adhesive to discrete sheets (134, Figure 4D; col. 12 lines 66-68; col. 13 line 1), and a

Art Unit: 1745

heating station upstream from the platform that is adapted to heat the discrete sheets (132, Figure 4D; col. 12 lines 63-66).

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to incorporate the specific apparatus feature(s) of the alternate embodiment of Bynum in order to modify the apparatus of the main embodiment of Bynum in view of Landeck. The rationale to do so would have been the motivation provided by the teachings of the advantages to incorporating said feature(s) of the alternate embodiment; that in incorporating said feature(s), the resulting apparatus becomes more capable of forming large objects of relatively thick sections at a more rapid manufacturing pace, which is desirable in the industrial art (Bynum: col. 11 lines 65-68; col. 12 lines 1-7).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,088,047 (Bynum) in view of US Patent 5,024,862 (Frank).

Regarding claim 28, Bynum teaches a machine comprising:

a conveyor adapted to movably support the sheet stock and sequential discrete sheets of desired shapes (86, Figure 3; col. 10 lines 59-66);

one or more cutting heads (99, Figure 3; col. 11 lines 36-38) movably transversely and longitudinally relative to the conveyor and adapted to cut the sheet

Art Unit: 1745

stock supported by the conveyor into the discrete sheets (60, Figure 3; col. 11 lines 36-38);

a platform (66, Figure 3; col. 11 lines 29-36) below the conveyor adapted to receive the discrete sheets from the conveyor, wherein the platform and conveyor are movable relative each other (col. 11 lines 29-36):

- i) to place the discrete sheets in stacked arrangement on the platform when receiving the discrete sheets from the conveyor (60, Figure 3; col. 11 lines 29-36);
- ii) to compress the stacked arrangement of discrete sheets between the platform and the conveyor (col. 11 lines 29-36).

Bynum does not expressly disclose the one or more cutting heads comprise:

a first set of one or more cutting heads movable transversely and longitudinally relative to the conveyor and adapted to cut inner scrap cutouts from the sheet stock supported by the conveyor; and

a second set of one or more cutting heads movable transversely and longitudinally relative to the conveyor and adapted to cut the sheet stock supported by the conveyor into sequential discrete sheets of desired shapes, wherein the second set of one or more cutting heads is downstream from the first set of one or more cutting heads.

Bynum further does not expressly disclose a vacuum head adapted to lift the inner scrap cutouts from the conveyor, wherein the vacuum head is downstream from the first

Art Unit: 1745

set of one or more cutting heads and upstream from the second set of one or more cutting heads.

Frank teaches an apparatus for automated cutting of composite material, said apparatus comprising a moving conveyor (34, Figure 1; col. 3 lines 12-17) comprising a vacuum (Figure 1; col. 3 lines 12-17), and:

a first set of one or more cutting heads movable transversely and longitudinally relative to the conveyor and adapted to cut inner scrap cutouts from sheet stock (22, Figure 1; col. 2 lines 63-66) supported by the conveyor (44d, 46d, Figure 2A-2F; col. 3 lines 23-41); and

a second set of one or more cutting heads movable transversely and longitudinally relative to the conveyor and adapted to cut the sheet stock supported by the conveyor into sequential discrete sheets of desired shapes (28, Figure 1; col. 3 lines 3-11);

wherein the second set of one or more cutting heads (28, Figure 1; col. 3 lines 3-11) is upstream from the first set of one or more cutting heads (44d, 46d, Figure 2A-2F; col. 3 lines 23-41); and

the vacuum head is downstream from the first set of one or more cutting heads and from the second set of one or more cutting heads (Figure 3).

Shifting the position of the first and second sets of cutting heads would not have modified the operation of the machine of Frank. The placement of said sets is an

Art Unit: 1745

obvious matter of design choice. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). Thus, it would have been obvious to one ordinarily skilled in the art at the time the invention was made to shift the position of the second set of cutting heads so that said second set is situated downstream from the first set of one or more cutting heads. It would further have been obvious to one ordinarily skilled in the art at the time the invention was made to shift the position of the first or second set of cutting heads such that the vacuum head is thus downstream from said first set and upstream from said second set. The placement of said sets is an obvious matter of design choice and would not modify the operation of the apparatus of Frank.

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to incorporate the specific cutting configurations of the apparatus of Frank in order to modify the apparatus of Bynum. The rationale to do so would have been the motivation provided by the teachings of the advantages to incorporating said configurations of Frank; that in incorporating said configurations, an efficient cutting cycle is implemented wherein any desired shape is feasibly and reliably from any given sheet(s) (Frank: col. 3 lines 31-42); further, in part due to this increased efficiency, any number of layups can be made more quickly and with reduced generation of scrap / waste material (Frank: col. 4 lines 38-41).

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,088,047 (Bynum) in view of US Patent 4,966,059 (Landeck), and in further view of US Patent 5,024,862 (Frank).

Regarding claim 31, the teachings of the limitations of Bynum in view of Landeck are detailed above in the rejection of claim 21 under 35 U.S.C. 103(a). Bynum in view of Landeck does not expressly disclose the one or more cutting heads are movably supported above the conveyor by rails.

Frank teaches the one or more cutting heads are movably supported above the conveyor by rails (48, 50, Figures 2A-2F; col. 3 lines 23-30).

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to incorporate the rails of Frank in order to move the cutting heads of Bynum in view of Landeck. The rationale to do so would have been the motivation provided by the teachings of the advantages to incorporating said rails of Frank; that in incorporating said rails, the cutting heads are provided with a reliable method of displacement and additionally have considerable ranges of longitudinal and other types of movement (Frank: col. 3 lines 23-42).

Claims 34, 51, 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,088,047 (Bynum) in view of US Patent 5,024,862 (Frank).

Regarding claims 34 and 51, Bynum teaches a machine comprising:

a conveyor adapted to movably support the sheet stock and sequential discrete sheets of desired shapes (86, Figure 3; col. 10 lines 59-66);

one or more cutting heads (99, Figure 3; col. 11 lines 36-38) movably transversely and longitudinally relative to the conveyor and adapted to cut the sheet stock supported by the conveyor into the discrete sheets (60, Figure 3; col. 11 lines 36-38);

a platform (66, Figure 3; col. 11 lines 29-36) below the conveyor adapted to receive the discrete sheets from the conveyor, wherein the platform and conveyor are movable relative each other (col. 11 lines 29-36):

i) to place the discrete sheets in stacked arrangement on the platform when receiving the discrete sheets from the conveyor (60, Figure 3; col. 11 lines 29-36);

ii) to compress the stacked arrangement of discrete sheets between the platform and the conveyor (col. 11 lines 29-36).

Bynum does not expressly disclose the one or more cutting heads comprise a plurality of cutting heads, wherein the plurality of cutting heads is adapted to cut multiple sheets of the same shape oriented perpendicular to the direction of travel of the conveyor.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably

Art Unit: 1745

distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, regarding claim 34, Frank teaches the one or more cutting heads comprise a plurality of cutting heads (44d, 46d, Figure 2A-2F; col. 3 lines 23-41), wherein the plurality of cutting heads is adapted to cut multiple sheets of the same shape oriented perpendicular to the direction of travel of the conveyor (44d, 46d, Figure 2A-2F; col. 3 lines 23-41).

Claim 34 is an apparatus claim that comprises a plurality of cutting heads that are adapted to cut multiple sheets. The apparatus of Frank comprises a plurality of cutting heads which is capable of performing the intended use / function of the claimed apparatus. The number of sheets, the shape of said sheets, and the orientation of said sheets do not lend structural limitations to the claimed apparatus. Thus, the apparatus of Mekala meets the claimed limitations of the claimed apparatus.

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to incorporate the specific cutting configurations of the apparatus of Frank in order to modify the apparatus of Bynum. The rationale to do so would have been the motivation provided by the teachings of the advantages to incorporating said configurations of Frank; that in incorporating said configurations, an efficient cutting cycle is implemented wherein any desired shape is feasibly and reliably from any given sheet(s) (Frank: col. 3 lines 31-42); further, in part due to this increased efficiency, any number of layups can be made more quickly and with reduced generation of scrap / waste material (Frank: col. 4 lines 38-41).

Regarding claim 53, Bynum teaches the platform (66, Figure 3; col. 11 lines 29-36) is below the conveyor belt (86 in relation to 66, Figure 3; col. 11 lines 29-36).

Regarding claim 54, Bynum teaches the platform and conveyor belt are movable relative each other to compress the stacked arrangement of discrete sheets between the platform and the conveyor belt (col. 11 lines 29-36).

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,088,047 (Bynum) in view of US Patent 4,966,059 (Landeck), and in further view of US Patent 5,024,862 (Frank).

Regarding claim 39, the teachings of the limitations of Bynum in view of Landeck are detailed above in the rejection of claim 21 under 35 U.S.C. 103(a). Bynum in view of Landeck does not expressly disclose does not expressly disclose the sheet stock feeding system is adapted to supply individual portions of sheet stock of cushioning material to the conveyor.

Frank teaches the sheet stock feeding system is adapted to supply individual portions of sheet stock (52, Figure 1; col. 3 lines 37-41) of cushioning material to the conveyor (34, Figure 1; col. 3 lines 37-41).

Art Unit: 1745

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to incorporate the specific feeding configurations of the apparatus of Frank in order to modify the apparatus of Bynum. The rationale to do so would have been the motivation provided by the teachings of the advantages to incorporating said configurations of Frank; that in incorporating said configurations, the production of layups of laminated material is made much more efficient; any number of layups can be made more quickly and with reduced generation of scrap / waste material (Frank: col. 4 lines 38-41).

Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,088,047 (Bynum).

Regarding claim 50, the teachings of the limitations of Bynum are detailed above in the rejection of claim 48 under 35 U.S.C. 102(b).

However, Bynum does not expressly disclose that the conveyor comprises a vacuum conveyor. Bynum further does not expressly disclose an adhesion station upstream from the platform that is adapted to apply an adhesive to discrete sheets, or a heating station upstream from the platform that is adapted to heat the discrete sheets.

An alternative embodiment of Bynum teaches a method and apparatus for processing discrete laminate sheets, said apparatus comprising a vacuum conveyor (10, Figure 4A;

Art Unit: 1745

col. 12 lines 17-26) that applies vacuum to a platform (108, Figure 4A; col. 12 lines 16-26), and an adhesion station upstream from the platform that is adapted to apply an adhesive to discrete sheets (134, Figure 4D; col. 12 lines 66-68; col. 13 line 1), and a heating station upstream from the platform that is adapted to heat the discrete sheets (132, Figure 4D; col. 12 lines 63-66).

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to incorporate the specific apparatus feature(s) of the alternate embodiment of Bynum in order to modify the apparatus of the main embodiment of Bynum. The rationale to do so would have been the motivation provided by the teachings of the advantages to incorporating said feature(s) of the alternate embodiment; that in incorporating said feature(s), the resulting apparatus becomes more capable of forming large objects of relatively thick sections at a more rapid manufacturing pace, which is desirable in the industrial art (Bynum: col. 11 lines 65-68; col. 12 lines 1-7).

Claims 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,088,047 (Bynum) in view of US Patent 5,024,862 (Frank), and in further view of US Patent 4,966,059 (Landeck).

Regarding claim 55, the teachings of the limitations of Bynum in view of Frank are detailed above in the rejection of claim 51 under 35 U.S.C. 103(a).

Art Unit: 1745

Bynum in view of Frank does not expressly disclose that said cutting heads are specifically fluid jet cutting heads.

However, Landeck teaches waterjet cutting heads (106, Figure 1) for cutting a sheet (101, Figure 1), wherein said waterjet cutting heads can be oriented underneath a conveyor to point and cut upwards (see axis of rotation 105, Figure 1; col. 15 lines 48-50; col. 16 lines 33-41).

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to incorporate the waterjet cutting heads of Landeck in order to modify and / or replace the cutting heads of Bynum in view of Frank. The rationale to do so would have been the motivation provided by the teachings of the advantages to incorporating said waterjet cutting heads of Landeck; that said waterjet cutting heads are capable of continuous repetitive cutting, and advantageously provide high-speed cutting of the sheet, without suffering from splashback problems and generally raggedly cut edges, and wherein said cutting is unaffected by stresses imposed on the waterjet heads, (Landeck: col. 5 lines 37-48; col. 6 lines 23-28; col. 7 lines 17-20).

Response to Arguments

Examiner thanks Applicant for their response(s).

In response to Applicant's remarks that US Patent 5,088,047 (Bynum) in view of US Patent 5,024,862 (Frank) does not teach the recited feature of the vacuum head is downstream from the first set of one or more cutting heads and upstream from the second set of one or more cutting heads, shifting the position of the first and second sets of cutting heads would not have modified the operation of the machine of Frank. The placement of said sets is an obvious matter of design choice. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

Thus, it would have been obvious to one ordinarily skilled in the art at the time the invention was made to shift the position of the second set of cutting heads so that said second set is situated downstream from the first set of one or more cutting heads. It would further have been obvious to one ordinarily skilled in the art at the time the invention was made to shift the position of the first or second set of cutting heads such that the vacuum head is thus downstream from said first set and upstream from said second set. The placement of said sets is an obvious matter of design choice and would not modify the operation of the apparatus of Frank.

In response to Applicant's arguments that Bynum in view of Frank fails to teach or suggest the following limitations of Claim 34: "cutting heads are adapted to cut multiple sheets of the same shape oriented across the conveyor perpendicular to the direction of travel of the conveyor", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the

Art Unit: 1745

prior art structure is capable of performing the intended use, then it meets the claim. In this case, regarding claim 34, Frank teaches the one or more cutting heads comprise a plurality of cutting heads (44d, 46d, Figure 2A-2F; col. 3 lines 23-41), wherein the plurality of cutting heads is adapted to cut multiple sheets of the same shape oriented perpendicular to the direction of travel of the conveyor (44d, 46d, Figure 2A-2F; col. 3 lines 23-41).

Claim 34 is an apparatus claim that comprises a plurality of cutting heads that are adapted to cut multiple sheets. The apparatus of Frank comprises a plurality of cutting heads which is capable of performing the intended use / function of the claimed apparatus. The number of sheets, the shape of said sheets, and the orientation of said sheets do not lend structural limitations to the claimed apparatus. Thus, the apparatus of Mekala meets the claimed limitations of the claimed apparatus.

In response to Applicant's arguments that Bynum fails to teach the recited feature of a "second conveyor," of Claim 36, Bynum teaches the platform comprises a second conveyor (by definition, a mechanical apparatus that transports materials, packages, or items being assembled from one place to another) (63, Figure 2A; col. 8 lines 63-67).

In response to Applicant's remarks that the one or more cutting heads of Bynum is under the conveyor, and thus does not anticipate the limitations of claim 48, the

Art Unit: 1745

cutting head(s) of Bynum define a cutting area over (by definition, upon the surface of) the conveyor.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VICKI WU whose telephone number is (571)270-7666. The examiner can normally be reached on M-F (8:30 am-6:30 pm), every other Fri. off.

Art Unit: 1745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-270-8666.

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/V.W./

Patent Examiner, TC 1745

/Philip C Tucker/

Supervisory Patent Examiner, Art Unit 1745